

The invention describes methods for inhibiting angiogenesis in a tissue by administering an antagonist that specifically binds to a proteolyzed or denatured collagen but not to native triple helical forms of the collagen. Antagonists of the invention can target, for example, denatured collagens type-I, type-II, type-III, type-IV, type-V and combinations thereof. Methods utilizing such antagonists for therapeutic treatment of tumor growth, tumor metastasis or of restenosis also are described, as are methods to use such antagonists as diagnostic markers of angiogenesis in normal or diseased tissues both *in vivo* and *ex vivo*. Antagonists include monoclonal antibodies referred to as HUI77, HUIV26, and XL313.